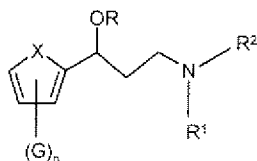


IN THE CLAIMS

1. (withdrawn): A process for the preparation of a compound of Formula (1):



Formula (1)

wherein:

X is S, O or NR³, wherein R³ is H or an organic group;

R is H or an organic group;

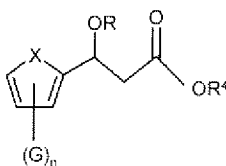
R¹ and R² each independently are H, optionally substituted alkyl or optionally substituted aryl;

G is a substituent; and

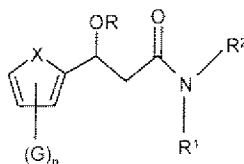
n is 0 to 3;

which comprises the steps:

- (a) reacting a compound of Formula (2) with a compound of Formula NHR¹R² to give a compound of Formula (3):



Formula (2)

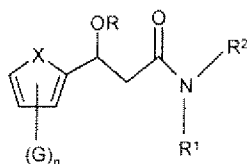


Formula (3)

wherein X, R, G and n are as defined above and R⁴ is optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted aryl, optionally substituted heteroaryl or a combination thereof; and

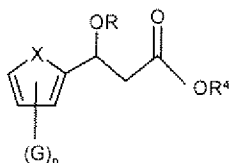
- (b) reducing the compound of Formula (3) to give a compound of Formula (1).

2. (withdrawn): A process for the preparation of a compound of Formula (3):



Formula (3)

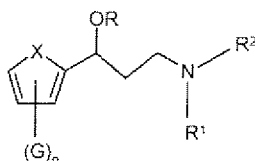
whereby a compound of Formula (2):



Formula (2)

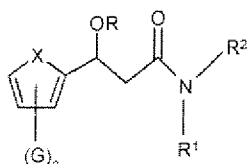
is reacted with a compound of Formula NHR^1R^2 to give a compound of Formula (3);
wherein X, G, n, R, R¹, R² and R⁴ are as defined in claim 1.

3. (withdrawn): A process for the preparation of a compound of Formula (1):



Formula (1)

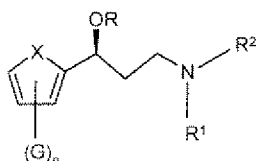
in which a compound of Formula (3):



Formula (3)

is reduced to give a compound of Formula (1): wherein X, G, n, R, R¹ and R² are as defined in claim 1.

4. (withdrawn): A process according to any one of claims 1 and 3 wherein the compounds of Formula (1) are of Formula (4):



Formula (4).

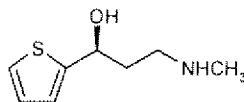
wherein X, G, n, R, R¹ and R² are as defined in claim 1.

5. (withdrawn): A process according to any one of claims 1 and 3 wherein X is S.

6. (withdrawn): A process according to any one of claims 1 and 3 wherein R is H or naphthyl.

7. (withdrawn): A process according to any one of claims 1 and 3 wherein one of R¹ and R² is H and the other is methyl.

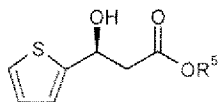
8. (withdrawn): A process according to claim 1 for the preparation of a compound of Formula (10):



Formula (10)

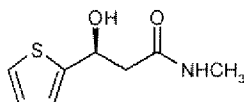
which comprises the steps:

(a) reacting a compound of Formula (9):



Formula (9)

where R⁵ is optionally substituted C₁₋₈alkyl, with methylamine to give a compound of Formula (11):

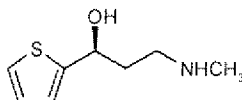


Formula (11)

and

(b) reducing the compound of Formula (11) to give the compound of Formula (10).

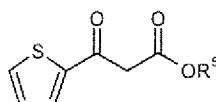
9. (withdrawn): A process according to claim 8 for the preparation of a compound of Formula (10):



Formula (10)

which comprises the steps:

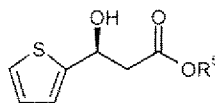
(i) acetylating 2-acetyl thiophene to give the compound of Formula (8):



Formula (8)

where R⁵ is optionally substituted C₁₋₈alkyl;

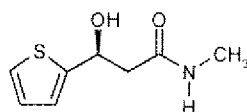
(ii) reducing the compound of Formula (8) to give the compound of Formula (9):



Formula (9)

where R⁵ is optionally substituted C₁₋₈alkyl;

(iii) reacting a compound of Formula (9) with methylamine to give a compound of Formula (11):

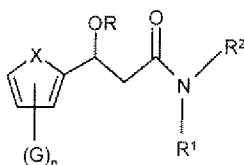


Formula (11)

and

(iv) reducing the compound of Formula (11) to give the compound of Formula (10).

10. (withdrawn): A compound of Formula (3):



Formula (3)

wherein

X is S, O or NR³, wherein R³ is H or an organic group;

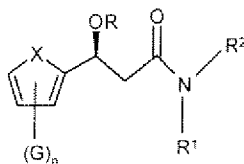
R is H or an organic group;

R¹ and R² each independently are H, optionally substituted alkyl or optionally substituted aryl;

G is a substituent; and

n is 0 to 3.

11. (withdrawn): A compound of Formula (3), according to claim 10, of Formula (12):



Formula (12)

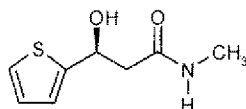
wherein X, G, n, R, R¹ and R² are as defined in claim 10.

12. (withdrawn): A compound according to claim 10 or claim 11 wherein X is S.

13. (withdrawn): A compound according to claim 10 or claim 11 wherein R is H or naphthyl.

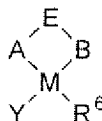
14. (withdrawn): A compound according to claim 10 or claim 11 wherein one of R¹ and R² is H and the other is methyl.

15. (withdrawn): A compound according to claim 11 of Formula (11):



Formula (11)

16. (currently amended): A catalyst of formula:



wherein:

R⁶ represents a neutral optionally substituted hydrocarbyl, a neutral optionally substituted perhalogenated hydrocarbyl, or an optionally substituted cyclopentadienyl ligand;

~~A represents an optionally substituted nitrogen;~~

~~B represents an optionally substituted nitrogen, oxygen, sulphur or phosphorous;~~

each of A and B is present as a sulphonamide group represented by -NR⁷-, -NHR⁷, NR⁷R⁸-, -NR¹¹-, -NHR¹¹ or NR¹⁰R¹¹ wherein R⁸ and R¹⁰ are each independently optionally substituted hydrocarbyl, perhalogenated hydrocarbyl or an optionally substituted heterocyclyl group, and where R⁷ and R¹¹ is a sulphonyl group represented by -S(O)₂R⁹ or -S(O)₂R¹², wherein R⁹ and R¹² is an optionally substituted hydrocarbyl group which is a cyclic alkyl group comprising from 3 to 10 carbon atoms in the largest ring and optionally including one or more bridging groups;

E represents a linking group;

M represents a metal capable of catalysing transfer hydrogenation; and

Y represents an anionic group, a basic ligand or a vacant site;

~~provided that at least one of A or B comprises a substituted nitrogen and the substituent has at least one chiral centre; and~~

provided that when Y is not a vacant site that, at least one of A or B carries a hydrogen atom.

17. (canceled)

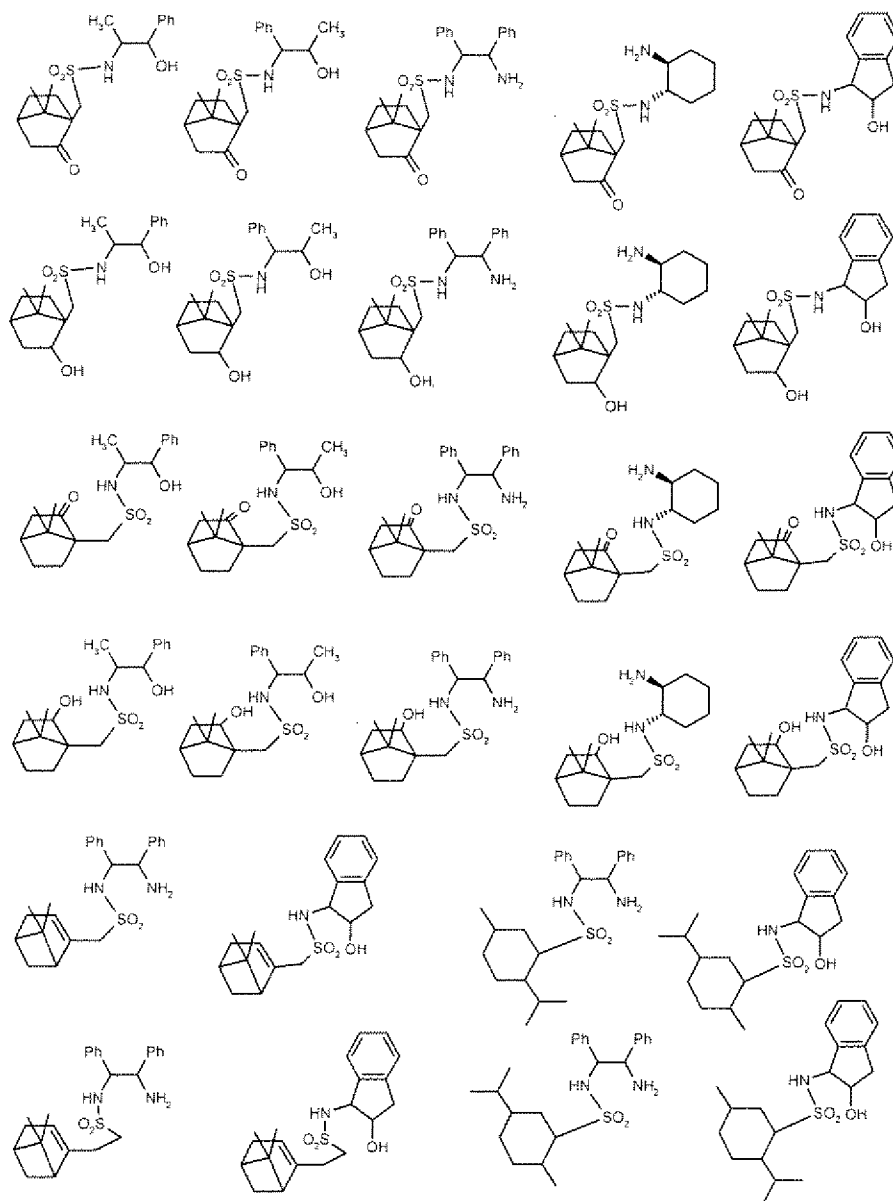
18. (canceled)

19. (canceled)

20. (currently amended): A catalyst according to Claim ~~19~~ 16 wherein one of R⁷ or R¹¹ is (1R) 1-(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methanesulfonyl, (1S) 1-(7,7-dimethyl-2-oxobicyclo[2.2.1]hept-1-yl)methanesulfonyl, (1R,2S) 1-(7,7-dimethyl-2-hydroxybicyclo[2.2.1]hept-1-yl)methanesulfonyl, (1R,2R) 1-(7,7-dimethyl-2-hydroxybicyclo[2.2.1]hept-1-yl)methanesulfonyl, (1S,2R) 1-(7,7-dimethyl-2-hydroxybicyclo[2.2.1]hept-1-yl)methanesulfonyl, (1S,2S) 1-(7,7-dimethyl-2-hydroxybicyclo[2.2.1]hept-1-yl)methanesulfonyl, (2S) 1-(6,6-dimethylbicyclo[3.1.1]hept-2-ene)-2-ethansulfonyl, (2R) 1-(6,6-dimethylbicyclo[3.1.1]hept-2-ene)-2-ethansulfonyl, (2S) 1-(6,6-dimethylbicyclo[3.1.1]hept-2-ene)-2-methansulfonyl, (2R) 1-(6,6-dimethylbicyclo[3.1.1]hept-2-ene)-2-methansulfonyl, (1R,2R,5R) 5-isopropyl-2-methylcyclohexansulfonyl, or (1S,2S,5R) 5-isopropyl-2-methylcyclohexansulfonyl, (1S,2S,5R) 2-isopropyl-5-methylcyclohexansulfonyl.

21. (currently amended): A catalyst according to ~~any one of Claims 16 to 20~~ claim 16 wherein E is a linking group such that A and B are linked through 2, 3 or 4 atoms which are optionally substituted.

22. (withdrawn): A ligand of formula:



and diastereomers or resolved forms thereof.